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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,652	02/28/2002	Timothy D. Wilkinson	124-930	3971

7590 03/02/2004  
NIXON & VANDERHYE P.C.  
8th Floor  
1100 North Glebe Road  
Arlington, VA 22201

EXAMINER

PHAN, THANH S

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

15-D-

<b>Office Action Summary</b>	<b>Application No.</b> 10/084,652	<b>Applicant(s)</b> WILKINSON ET AL.	
	<b>Examiner</b> Thanh S Phan	<b>Art Unit</b> 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 28-34 is/are rejected.
- 7) ☒ Claim(s) 22-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant should clarify what the spacers is "overall electrically insulating between top and bottom."

Regarding claim 23, there is no antecedent basis for "said lane."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 and 28-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim [US 2002/0003519] in view of Levine et al. [US 5,902,165].

Regarding claims 1, 3-6, Kim discloses a back plane [figure 3] comprising an array of electronic elements [paragraph 26] comprising at least a first and second electronic element layers [51, 51a] and at least one separate spacer [101] which rises higher over the back plane [51] than the array [66, 68] and a second spacer layer [103].

Kim disclose the instant claimed invention except for the first and second spacer layer being comprise of substantially the same material as the electronic layers.

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Levine et al. disclose a plurality of spacers [125] having the same material as the electronic layers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the spacer design of Levine et al. with Kim to facilitate manufacture.

Regarding claim 2, Kim discloses the backplane being formed of a semiconductor material [paragraph 26].

Regarding claims 7-8, Kim discloses a plurality of spacers regularly distributed over the backplane [figure 3].

Regarding claims 9-10, Kim discloses the array providing a plurality of addressable locations with each location having a spacer associated therewith [figure 1].

Regarding claims 11-12, Kim disclose the instant claimed invention except for the specific shape of the spacers.

The specific shape of the spacers would have been an obvious design consideration based on the particular backplane configuration.

Regarding claim 13-15, Levine et al. discloses an insulating layer [32] having a general constant thickness extending over at least one layer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the insulating layer of Levine et al. in Kim for the purpose of protecting the electronic layer.

Regarding claims 16-20 and 32-34, Kim discloses a reflective electrode [74] mounted on the insulating layer.

Regarding claim 21, Kim discloses at least some of the spacers [203] being disposed externally of the array.

Regarding claims 28-31, the claimed method steps are necessitated by the product structure.

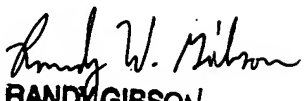
***Allowable Subject Matter***

Claims 22-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh S Phan whose telephone number is 571-272-2109. The examiner can normally be reached on M-F 9:00-5:00.

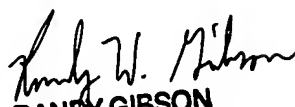
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S Martin can be reached on 571-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

  
**RANDY GIBSON**  
**PRIMARY EXAMINER**

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tsp

  
**RANDY GIBSON**  
**PRIMARY EXAMINER**